

STEM Around the World

Global Innovations and Diverse Role Models

Why Global STEM Matters

STEM is a universal language that connects people across cultures. Learning about global innovations and diverse scientists helps students see that anyone can contribute to STEM, regardless of where they're from or what they look like.

Ancient Innovations

China: Paper, compass, gunpowder, printing

Egypt: Pyramids, mathematics, medicine

India: Zero, decimal system, astronomy

Middle East: Algebra, optics, hospitals

Americas: Advanced agriculture, astronomy, architecture

Modern Innovations by Country

Japan: Bullet trains, robotics, video games

Kenya: Mobile banking (M-Pesa)

India: Low-cost medical devices

Brazil: Biofuels from sugarcane

South Korea: Smartphones, memory chips

Israel: Drip irrigation, cybersecurity

Ghana: Cardboard VR headsets

Diverse STEM Role Models

Mae Jemison (USA): First African American woman in space

Tu Youyou (China): Nobel Prize for malaria treatment

Srinivasa Ramanujan (India): Mathematical genius

Wangari Maathai (Kenya): Environmental scientist

Dallas W. Thompson - STEM Resources

Maryam Mirzakhani (Iran): First woman to win Fields Medal in math

Carlos Slim (Mexico): Telecommunications innovator

Global STEM Challenges

Climate Change: Scientists worldwide working on solutions

Clean Water: Innovations in filtration and desalination

Renewable Energy: Solar, wind, and hydroelectric advances

Food Security: Agricultural technology and GMOs

Health: Vaccine development and disease prevention

Space Exploration: International cooperation

Activities

- * Research an invention from another country
- * Learn about a scientist from a different culture
- * Compare how different countries solve similar problems
- * Create a "STEM Around the World" poster
- * Connect with classrooms in other countries
- * Celebrate International Day of Women and Girls in Science (Feb 11)